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EXAMINER

PIATESKI, ERIN M

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte GENE A. BORNZIN and JOHN W. POORE

Appeal 2015-001963
Application 13/669,168
Technology Center 3700

Before: CHARLES N. GREENHUT, BRETT C. MARTIN, and
BRENT M. DOUGAL, *Administrative Patent Judges*.

GREENHUT, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from a rejection of claims 1–
10. We have jurisdiction under 35 U.S.C. § 6(b).
We affirm.

CLAIMED SUBJECT MATTER

The claims are directed to a leadless implantable medical device with dual chamber sensing functionality. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A leadless implantable medical device (LIMD), comprising:
 - a housing configured to be implanted entirely within a single local chamber of the heart, the local chamber having local wall tissue that constitutes part of a conduction network of the local chamber;
 - a controller within the housing to cause stimulus pulses to be delivered;
 - a sensing circuit to perform sensing;
 - an active fixation member coupled to the housing, the active fixation member configured to be secured to a septum that separates the local chamber from an adjacent chamber, the adjacent chamber having distal wall tissue, with respect to the local chamber, that constitutes part of a conduction network of the adjacent chamber; and
 - an electrode pair having first and second active electrode areas coupled to the sensing circuit, the first and second electrode areas positioned such that, when the LIMD is implanted, the electrode pair penetrates the septum so that the electrode pair is electrically coupled to the conduction network of the adjacent chamber in the distal wall tissue, the sensing circuit detecting, as near field signals, voltages originating within the conduction network of the adjacent chamber and sensed by the first and second active electrode areas, the sensing circuit rejecting, as far field signals, voltages originating within the conduction network of the local chamber and sensed by the first and second active electrode areas.

REJECTIONS

Claims 1, 2, and 4 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Cowan (US Patent Application Publication 2006/0136004 A1, published Jun. 22, 2006) Peacock (US Patent Application Publication

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2010/0069983 A1, published Mar. 18, 2010), and Levine (US Patent No. 7, 184,834 B1, issued Feb. 27, 2007).

Claims 3–9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Cowan, Peacock, Levine, and Friedman (WO 2011/028949 A1, published Mar. 10, 2011).

Claim 10 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Cowan, Peacock, Levine, Friedman and Weyant (US Patent No. 4,513,752, issued Apr. 30, 1985).

OPINION

All claims are either grouped with, or argued based on dependency from, claim 1. Regarding claim 1, the Examiner relies on Cowan for, among other things, demonstrating that multisite sensing and/or pacing was known to be desirable in certain conditions, albeit sometimes difficult to implement, and suggesting that more than one site, not necessarily in the same chamber, can be communicated with by penetrating the septum. Final Act. 3–4 (citing Cowan paras. 10, 24, 90; fig. 9b); Ans. 16–17 (citing Cowan paras. 24–26).

Appellants argue:

the Examiner points to various sections of the background of Cowan et al. (paragraph [0024]) to allege that Cowan et al. teach a leadless device implanted in a local chamber with electrodes coupled to the conduction network of an adjacent chamber. However, Cowan et al. itself makes no such disclosure...

Br. 9. However, Appellants statement mischaracterizes the Examiner's rejection. The Examiner expressly acknowledges:

Cowan does not specifically teach that the pair of electrodes penetrates the septum (the figure shows only one electrode visibly penetrating the septum) so that the electrode pair is

electrically coupled to the conduction network of the adjacent chamber in the distal wall tissue.

Final Act. 4.

Regarding electrical coupling to the conduction network of an adjacent chamber the Examiner relies on Peacock. Ans. 4–5. Appellants do not address the Examiner’s findings regarding Peacock at all. Appellants turn to Levine and argue Levine “does not in any way disclose or suggest that near field signals should be detected from the conduction network of an adjacent chamber as alleged by the Examiner.” This statement may be correct but fails to account for the combined teachings of Levine and Peacock.

In Figure 3 of Peacock a first electrode 40 is shown in the right ventricle 4, a “local chamber,” and a second electrode 70 is placed in the septal wall 8 for communication with the left ventricle 6, and “adjacent chamber.” Levine teaches that signals from chambers *opposite* those with which communication is intended should be treated as “far-field” signals. Final Act. 6 (citing Levine col. 2, ll. 7–41). When Levine’s teaching in this regard is applied to Peacock’s electrode arrangement, the result is that for the electrode 70 (comprised of array 72, 74, 76), i.e., the electrode “electrically coupled to the conduction network of the adjacent chamber,” voltages originating from chamber 6, the “adjacent chamber” would be detected as near field signals and voltages originating from the *opposite*, or “the local” chamber 4, are rejected as far field signals. *See* Ans. 17–18. As Appellants have not addressed the Examiner’s well-reasoned position in this regard, which is based on the *combined teachings* of the references, the Examiner’s position stands essentially uncontroverted.

DECISION

The Examiner's rejections are affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED